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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/815,666	NAKAMURA ET AL.	
	Examiner	Art Unit	
	Abbas I. Abdulselam	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,8-11 and 15* is/are rejected.

7)☒ Claim(s) *5-7 and 12-14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/02/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Cunningham et al. (USPN 7202851).

Regarding claim 1, Cunningham et al. teach (hereinafter = "Cunningham") teach an inputting apparatus *(col. 4, lines 39-40, Fig. 1(140), haptic interface device (140))*, comprising: a manipulating section upon which a finger may be placed to manipulate the inputting apparatus *(col. 4, lines 14-15, col. 4, lines 20-28, col. 4, lines 39-40, Fig. 1 (140, 130) the haptic interface device (140) may comprise a user object (130), which is manipulatable by a user, or portion of the user object (130) being manipulatable by a user, and the user object (130) could be a mouse , col. 4, lines 25-28, note that the user's hand (which includes finger or finger(s)) is used in operating the mouse)*wherein said manipulating section is configured to tactile-stimulate said finger in place on said manipulating section upon occurrence of a predetermined condition *(col. 4, lines 29-31, col. 4, lines 43-47, Fig. 1 (140,*

130, 110, 115), the haptic interface device may comprise a user object 130, such as a mouse, that is mechanically linked to an actuator 135, which may provide the haptic sensation, ***when a predetermined event occurs within a graphical environment (110), such as an interaction of a cursor (115) with a graphical representation (120), a controller (125) causes an actuator (135) to output haptic sensation to the user****, col. 4, lines 53-56, col. 4, lines 66-67, col. 5, lines 1-2, by haptic sensation it is meant any sensation provided to the user that is related to the users sense of touch, such as tactile feedback, by tactile feedback it is meant any force applied to the user to provide the user with a tactile indication of a predetermined occurrence within the graphical environment 110).*

Regarding claim 3, Cunningham teaches an inputting apparatus for use with a pointer on a display screen, *(col. 4, lines 1-4, col. 4, lines 39-40, Fig. 1(140, 105, 115), haptic interface device (140), and a display (105), which provides a graphical environment (110) to a user, and the graphical environment (110) includes a cursor (115))* comprising: a tilt-enabled *(col. 18, line 20, a linear moving magnet actuator)* manipulating section *(Fig. 1 (140), Fig. 5 (200), col. 13, line 38, col. 15, line 24, col. 18, line 20, note that as shown in Fig. 5, the haptic interface device (140) comprises a mouse (200), which includes an*

actuator (135), also note that the actuator could be a linear moving-magnet actuator) upon which a finger may be placed to manipulate the inputting apparatus *(col. 4, lines 14-15, col. 4, lines 20-28, col. 4, lines 39-40, Fig. 1 (140, 130), the haptic interface device (140) may comprise a user object (130), which is manipulatable by a user, or portion of the user object (130) being manipulatable by a user, and the user object (130) could be a mouse, col. 4, lines 25-28, note that the user's hand (which includes finger or finger(s)) is used in operating the mouse)*; a signal-producing section configured to produce a signal in response to a tilt of the manipulating section, which signal causes the pointer on the display screen to be moved; *(col. 4, lines 14-20, a user object (130) is manipulatable by a user, and the manipulation of the user object 130 controls the position of the cursor 115 within the graphical environment 110 (example is , by correlating a position of the user object (130) with a rate of movement of the cursor 115), col. 14, lines 64-67, col. 15, lines 1-5, different mechanisms and or electronics can be used to convert mouse motion to position or motion signals received by the computer, for example, a frictional ball and roller are used to translate a planar motion of the mouse into electrical position signals)* wherein said manipulating section *(Fig. 1 (140))* includes a tactile-stimulating device *(Fig. 1 (135))* configured to tactile-stimulate said finger when said pointer is in a predetermined position on the display screen *(Fig. 1 (110, 115, 125), col. 4, lines 29-33, col. 4, lines, 63-67, when a predetermined event occurs*

within a graphical environment (110), such as the cursor (115) being positioned against a surface, a barrier, or an obstruction, a controller (125) causes an actuator (135) to output haptic sensation to the user, col. 4, lines 53-56, col. 4, lines 66-67, col. 5, lines 1-2, by haptic sensation it is meant any sensation provided to the user that is related to the users sense of touch, such as tactile feedback, by tactile feedback it is meant any force applied to the user to provide the user with a tactile indication of a predetermined occurrence within the graphical environment 110).

Regarding claim 2, Cunningham teaches the predetermined condition is met when a pointer which the inputting apparatus is used to control movement of on a display screen is positioned in a predetermined position on the display screen *(col. 4, lines 29-31, col. 4, lines 62-63, a predetermined occurrence within the graphical environment (110), such as the cursor (115) being positioned against a surface, a barrier, or an obstruction, see Fig. 1 with the cursor (115) on the graphical environment (110), which is in display (105), col. 4, lines 14-20, note that a user object (130) is manipulatable by a user, and the manipulation of the user object (130) controls the position of the cursor (115) within the graphical environment (110), an example is by correlating a position of the user object (130) with a rate of movement of the cursor 115).*

Regarding claims 9-10, Cunningham teaches a manipulating apparatus *(fig. 5 (140, 210, 125))* which incorporates thereinto the inputting apparatus *(Fig. 5 (140))* as claimed in claim 1, claim 3 *(col. 13, lines 35-38, Fig. 5 (140, 210, 125), and a controller (125) is implemented in a computer (210) and the haptic interface device (140)).*

3. Claims 3 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Wegmuller et al. (USPN 6646632).

Regarding claim 3, Wegmuller teaches an inputting apparatus for use with a pointer on a display screen *(col. 4, lines 25-27, col. 4, lines 31-32, col. 4, lines 42-44, Fig. 5D (102, 10), a user manipulable device (10), which could be a mouse and a display (102) including a cursor)* comprising: a tilt-enabled *(col. 5, lines 8-9, a magnet (40) in a mouse (20) moves up or down)* manipulating section upon which a finger may be placed to manipulate the inputting apparatus *(col. 4, lines 30-31, Fig. 5d (10), a user manipulable device (10), col. 1, lines 9-13, the use of a mouse enabling the user to interact with computer to operate s GUI, play game etc, note that it is inherent a finger or fingers is/are used in operating the mouse (10), and it is also inherent a finger or fingers utilizing the mouse (10) occupy part of the mouse (10))*; a signal-producing section configured to produce a signal in response to a tilt of the manipulating section, which signal causes the pointer on the

display screen to be moved *(as shown in Fig. 5d, a user manipulable device (10) electronically interfacing with a display (102) via an interface board (110) and computer (100), col. 4, lines 40-45, the user manipulable device (10) with respect to a display (102) on which the cursor is manipulated, note that when the mouse (10) is utilized, it is inherent a signal should be sent, in order to interact with the cursor on the display (102);)* wherein said manipulating section includes a tactile-stimulating device configured to tactile-stimulate said finger when said pointer is in a predetermined position on the display screen *(col. 4, lines 48-65, Fig.6 (42), as shown in Fig. 6, a user manipulable device (10) includes an electromagnet 42, which generates magnetic field, and based on the force profile information and the measured position of the cursor on the display 102, the user manipulable device 10 produces force feedback, col. 1, lines 20-23, col. 4, 63-65, note that a force feedback provides physical sensations to the user).*

Regarding claim 10, Wegmuller teaches a manipulating apparatus *(Fig. 5d (10, 110, 102, 100)* which incorporates thereinto the inputting apparatus *(Fig. 5d (10))* as claimed in claim 3 *(col. 4, lines 1-40, Fig. 5d (10, 110, 102, 100), a user manipulable device 10 electronically interfaced with a computer (100) and display (102) via an interface board (110)).*

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 4, 8, 11 and 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wegmuller et al. (USPN 6646632).

Regarding claim 4, Wegmuller teaches said signal producing section includes: a permanent magnet disposed with respect to said manipulating section for tilting movement therewith *(Fig. 6 (40), col. 4, line 67, col. 5, line 1, a user manipulable device (10) includes a permanent magnet (40), which is movably disposed in a hollow core of an electromagnet 42 fixed to an input device)*; wherein said tactile-stimulating device *(Fig. 6 (42, 48a, 48b, 49a)* includes: a tactile-stimulating element *(Fig. 6 (42))* moveable between a tactile-stimulating position *(col. 5, lines 1-8, the electromagnet 42 includes a coil surrounding the magnet 40, and when the coil is energized, the magnet* ***moves up or down*** *depending on the polarity of the field generated by the coil)* and a non tactile-stimulating position *(Fig. 6 (48a, 48b, 49a), (Springs 49a, 49b are provided to support and space the*

moving magnet 40 between the case portions 48a, 48b ***in a neutral position,*** *note element "49b" is not shown in the fig.6),* the tactile-stimulating element being positioned with respect to the permanent magnet *(in Fig. 6, see the position of the magnet (40), with respect to electromagnet 42)* such that an electromagnetic force is generated using the magnetic field formed by said permanent magnet, which electromagnetic force moves said tactile-stimulating element to the tactile-stimulating position *(col. 5, lines 5-9, col. 5, lines 19-23, the electromagnet 42 includes a coil surrounding the magnet 40, when the coil is energized, the magnet moves up or down depending on the polarity of the field generated by the coil such that the electromagnetic forces generated by the electromagnet (42) overcomes the spring forces to drive the moving magnet up and down).*

Wegmuller teaches the electromagnet 42 of the device (10) generates a magnetic field, which causes the magnet (42) to slide up and down in the hollow core such that the electromagnet 42 includes a coil, and when the coil is energized, the magnet (40), moves up and down depending on the polarity of the filed generated by the coil (Fig. 6 (42), col. 4, lines 55-59, col. 5, lines 1-8). Wegmuller further teaches the electromagnet 42 generates a magnetic field varying in intensity and frequency in response to inputs from a host computer (col. 5, lines 1-3).

Note that Wegmuller teaches the user manipulable device (10), or mouse (10) with respect to a display (102) on which the cursor is manipulated (col. 4, lines 40-45). Note also that when the mouse (10), which includes a magnet (40) as shown in Fig. 6 is utilized, a signal should be sent in order to interact with the cursor on the display (102).

Wegmuller does not specifically teach magneto-electric converting elements which detect a change in magnetic field corresponding to tilting movement of said permanent magnet wherein the signal produced by said signal-producing section is based on said change in magnetic field;

Thus, it would have been obvious to one of ordinary skill in the art at the at the time the invention was made to recognize that Wegmuller's electromagnet 42 shown in Fig. 6 has to have a magnet-electric converter in order to vary the intensity and frequency in response to inputs from host computer.

Regarding claim 8, Wegmuller teaches an upper case 16, as shown in Fig. 1 under which an actuatable member 18 (permanent magnet 18) is caused to move up and down by attraction and repulsion generated by an electromagnet 30 (col. 3, lines 45-48).

Note that actuator member (18) along with an upper case (16) as configured in Fig. 1 could constitute the top part of a mouse device (10), and the mouse (10) with an upper case (16) has keytop as shown in Fig. 5

Wegmuller does not specifically teach the tactile-stimulating element is a keytop itself.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Wegmuller's tactile force feedback mechanism shown in Fig. 6 with a configuration of actuatable member (18) along with an upper case (16) as shown in Fig. 5(actuatable member (18) along with an upper case (16) having a keytop), because the use of actuatable member (18) as configured in Fig. 5 allows a striking of a device case by a contact member (20) to impart a tactile force feedback to be felt by the user (col. 3, lines 64-66).

Regarding claim 15, Wegmuller teaches a manipulating apparatus *(Fig. 5d (10, 110, 102, 100)* which incorporates thereinto the inputting apparatus *(Fig. 5d (10))* as claimed in claim 8 *(col. 4, lines 1-40, Fig. 5d (10, 110, 102, 100), a user manipulable device 10 electronically interfaced with a computer (100) and display (102) via an interface board (110)).*

Regarding claim 11, Wegmuller teaches a manipulating apparatus *(Fig. 5d (10, 110, 102, 100)* which incorporates thereinto the inputting apparatus *(Fig. 5d (10))* as claimed in claim 4 *(col. 4, lines 1-40, Fig. 5d (10, 110, 102, 100), a user manipulable device 10 electronically interfaced with a computer (100) and display (102) via an interface board (110)).*

Allowable Subject Matter

6. Claims 5-7 and 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 5, Wegmuller teaches said manipulating section includes: a keytop *(col. 4, lines 25-29, key button plate (17) with respect to a mouse (10), Fig. 5 (17), key button plate (17))* having an opening therein; a tubular-shaped holder held to a lower side of said keytop *(col. 5, line 1, hollow core inside a mouse (10))*; wherein said signal-producing section includes: a permanent magnet disposed at a bottom portion of said manipulating section for tilting movement therewith *(Fig. 6 (40), col. 4, line 67, col. 5, line 1, a user manipulable device (10) includes a permanent magnet (40), which is movably disposed in a hollow core of an electromagnet 42 fixed to an input device)*; and magneto-electric converting elements which detect a change in

magnetic field corresponding to tilting movement of said permanent magnet, wherein the signal produced by said signal-producing section is based on said change in magnetic field *(Fig. 6 (42), col. 4, lines 55-59, col. 5, lines 1-8, the electromagnet 42 of the device (10) generates a magnetic field, which causes the magnet (42) to slide up and down in the hollow core such that the electromagnet 42 includes a coil, and when the coil is energized, the magnet (40), moves up and down depending on the polarity of the filed generated by the coil, col. 4, lines 40-45, note Wegmuller teaches the user manipulable device (10), or mouse (10) with respect to a display (102) on which the cursor is manipulated, note also that when the mouse (10) which includes a magnet (40) as shown in Fig. 6, is utilized, a signal should be sent, in order to interact with the cursor on the display (102))*wherein said tactile-stimulating device includes a tactile-stimulating element disposed for movement within said holder between a tactile-stimulating position and a non tactile-stimulating position, which tactile-stimulating element includes a coil *(col. 5, lines 1-8, the electromagnet 42 includes a coil surrounding the magnet 40, and when the coil is energized, the magnet moves up or down depending on the polarity of the field generated by the coil, Fig. 6 (48a, 48b, 49a), springs 49a, 49b are provided to support and space the moving magnet 40 between the case portions 48a, 48b in a neutral position)* wherein delivery of a first drive current to said coil generates a first electromagnetic force using the magnetic field formed by said permanent magnet, which electromagnetic force moves said tactile-stimulating element

away from the permanent magnet *(col. 5, lines 5-9, col. 5, lines 19-23, the electromagnet 42 includes a coil surrounding the magnet 40, when the coil is energized, the magnet moves up or down depending on the polarity of the field generated by the coil such that the electromagnetic forces generated by the electromagnet (42) overcomes the spring forces to drive the moving magnet up and down).*

Neither Wegmuller nor Cunningham teaches an inputting apparatus including a tilt-enabled manipulating section, a signal producing section, a tactile stimulating device configured tactile-stimulate a finger, wherein the manipulating section includes: a keytop **having an opening therein**; a tubular-shaped holder held to a lower side of the keytop; wherein the signal-producing section includes: a permanent magnet disposed at a bottom portion of the manipulating section for tilting movement therewith; and magneto-electric converting elements which detect a change in magnetic field corresponding to tilting movement of the permanent magnet, wherein the signal produced by the signal-producing section is based on the change in magnetic field; wherein the tactile-stimulating device includes a tactile-stimulating element disposed for movement within the holder between a tactile-stimulating position and a non tactile-stimulating position, which tactile-stimulating element includes a coil and **a projecting member positioned with respect to an upper side of the coil, a portion of the projecting member projecting from the opening when the tactile-stimulating element is in the tactile-stimulating position**; wherein delivery of a first drive current to the coil generates a first

electromagnetic force using the magnetic field formed by the permanent magnet, which electromagnetic force moves the tactile-stimulating element away from the permanent magnet.

Regarding claim 7, Wegmuller teaches said manipulating section includes: a keytop *(col. 4, lines 25-29, key button plate (17) with respect to a mouse (10), Fig. 5 (17), key button plate (17))* a tubular-shaped holder held to a lower side of said keytop *(col. 5, line 1, hollow core inside a mouse (10), and Fig. 6 (48b), lower case portion (48b))*; wherein said signal-producing section includes: a permanent magnet of disposed at the bottom portion of said manipulating section for tilting movement therewith *(Fig. 6 (40), col. 4, line 67, col. 5, line 1, a user manipulable device (10) includes a permanent magnet (40), which is movably disposed in a hollow core of an electromagnet 42 fixed to an input device)*; and magneto-electric converting elements which detect a change in magnetic field corresponding to tilting movement of said permanent magnet, wherein the signal produced by said signal-producing section is based on said change in magnetic field *(Fig. 6 (42), col. 4, lines 55-59, col. 5, lines 1-8, the electromagnet 42 of the device (10) generates a magnetic field, which causes the magnet (42) to slide up and down in the hollow core such that the electromagnet 42 includes a coil, and when the coil is energized, the magnet (40), moves up and down depending on the polarity of the filed generated by the coil, col. 4, lines 40-45, note Wegmuller teaches the user manipulable device (10) or mouse (10) with respect to a display (102) on*

which the cursor is manipulated, note also that when the mouse (10) which includes a magnet (40) as shown in Fig. 6, is utilized, a signal should be sent, in order to interact with the cursor on the display (102)) wherein said tactile-stimulating device includes a tactile-stimulating element for movement within said holder with respect to the top face of said permanent magnet, which tactile-stimulating element includes a coil *(col. 5, lines 1-8, the electromagnet 42 includes a coil surrounding the magnet 40, and when the coil is energized, the magnet moves up or down depending on the polarity of the field generated by the coil)*; wherein delivery of a first drive current to said coil generates a first electromagnetic force using the magnetic field formed by said permanent magnet, which electromagnetic force moves said tactile-stimulating element to said top face of said permanent magnet *(col. 5, lines 5-9, col. 5, lines 19-23, the electromagnet 42 includes a coil surrounding the magnet 40, when the coil is energized, the magnet moves up or down depending on the polarity of the field generated by the coil such that the electromagnetic forces generated by the electromagnet (42) overcomes the spring forces to drive the moving magnet up and down).*

Neither Wegmuller nor Cunningham teaches an inputting apparatus, including a tilt-enabled manipulating section, a signal producing section, a tactile stimulating device configured to tactile-stimulate a finger, wherein the manipulating section includes: a keytop **having an opening therein**; a tubular-shaped holder held to a lower side of the keytop; wherein the signal-producing section includes: a permanent magnet disposed at a bottom portion of the

manipulating section for tilting movement therewith; and magneto-electric converting elements which detect a change in magnetic field corresponding to tilting movement of the permanent magnet, wherein the signal produced by the signal-producing section is based on the change in magnetic field; wherein the tactile-stimulating device includes a tactile-stimulating element for movement within the holder with respect to a top face of the permanent magnet, which tactile-stimulating element includes a coil and **a projecting member positioned with respect to an upper side of the coil, a portion of the projecting member projecting from the opening when the tactile-stimulating element is along the top face of the permanent magnet**; wherein delivery of a first drive current to the coil generates a first electromagnetic force using the magnetic field formed by the permanent magnet, which electromagnetic force moves the tactile-stimulating element to the top face of the permanent magnet.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following arts are cited for further reference.

U.S. Pat. No. 6,839,050 to Sakamaki et al. teach a tactile interface device which is able to convey a variety of information to an operator through their tactile sense without requiring the operator to view a visual display (col. 2, lines 32-35).

U.S. Pat No. 6,373,465 to Jolly et al. teach a semi-active haptic interface system 20, which provides resistance forces to an operator 22 and comprises a magnetically-controllable

device 24 that imparts force feedback resistance sensations to the operator through a haptic interface device 26 by opposing the movement of the haptic interface device (col. 6, lines 43-49).

U.S. pat No. 7,106,313 to Schena et al. teach as shown in Fig. 1 a force feedback mouse interface system 10 capable of providing input to a host computer based on the user's manipulation of the mouse and capable of providing force feedback to the user of the mouse system based on events occurring in a program implemented by the host computer.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I. Abdulselam whose telephone number is 571-272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas I Abdulselam
Examiner
Art Unit 2629
May 15, 2007